



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q95983

Yuzo SENDA

Appln. No.: 10/586,541

Group Art Unit: 2133

Confirmation No.: 4649

Examiner: Not yet assigned

Filed: July 19, 2006

For: PARITY CHECK MATRIX GENERATION METHOD, DATA TRANSMISSION
SYSTEM, ENCODING DEVICE, DECODING DEVICE, AND A PARTIY CHECK
MATRIX GENERATION PROGRAM

SUBMISSION OF INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

For the Examiner's convenience, enclosed herewith is a copy of the English translation of the International Preliminary Report on Patentability (IPRP). Copies of the cited references as required by § 371(c) were submitted in an Information Disclosure Statement previously filed on July 19, 2006, but if further copies are needed, the undersigned will undertake to provide them upon request.

Respectfully submitted,

Howard L. Bernstein
Registration No. 25,665

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WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: November 20, 2006

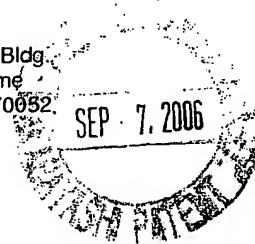
From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)
(PCT Rules 44bis.3(c) and 72.2)

To:

MIYAZAKI, Teruo
8th Floor, 16th Kowa Bldg.
9-20, Akasaka 1-chome
Minato-ku, Tokyo 1070052
JAPON



Date of mailing (day/month/year) 31 August 2006 (31.08.2006)	
Applicant's or agent's file reference NEC04P198	IMPORTANT NOTIFICATION
International application No. PCT/JP2005/000471	International filing date (day/month/year) 17 January 2005 (17.01.2005)
Applicant NEC CORPORATION et al	

1. Transmittal of the translation to the applicant.



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Masashi Honda



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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference NEC04P198	FOR FURTHER ACTION	See item 4 below
International application No. PCT/JP2005/000471	International filing date (<i>day/month/year</i>) 17 January 2005 (17.01.2005)	Priority date (<i>day/month/year</i>) 20 January 2004 (20.01.2004)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant NEC CORPORATION		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																								
2.	<p>This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Box No. I</td> <td style="width: 60%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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<input type="checkbox"/>	Box No. VII	Certain defects in the international application																							
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application																							
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Date of issuance of this report 22 August 2006 (22.08.2006)
Facsimile No. +41 22 338 82 70	Authorized officer <div style="text-align: center; font-weight: bold; margin-top: 10px;">Masashi Honda</div> e-mail: pt08@wipo.int

PATENT COOPERATION TREATY

TRANSLATION

PCT

From the
INTERNATIONAL SEARCHING AUTHORITY

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference

NEC04P198

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2005/000471

International filing date (day/month/year)

17.01.2005

Priority date (day/month/year)

20.01.2004

International Patent Classification (IPC) or both national classification and IPC

Applicant

NEC CORPORATION

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/000471

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/000471

Box No. V	Reasoned statement under Rule 43bis1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-38	YES
	Claims		NO
Inventive step (IS)	Claims	1-38	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-38	YES
	Claims		NO
2. Citations and explanations:			
<p>Document 1: JP, 2001-168733, A (Thomson-CSF), 22 June, 2001 (22.06.01), full text and all drawings & US, 6715121, B1 & EP, 1093231, A1 & FR, 2799592, A & CA, 2322983, A1</p> <p>Document 2: D.J.C. Machay, Good Error-Correcting Codes Based on Very Sparse Matrices, IEEE Transactions on Information theory, Vol. 45, No. 2, March 1999, pp. 399-431</p> <p>Document 3: WO, 2001/097387, A1 (AWARE, INC), 20 December, 2001 (20.12.01), [0055]-[0056], and Fig. 4 & JP, 2004-503979, A & US, 2002/0042899, A1 & EP, 1290802, A & AU, 6709601, A & CA, 2409179, A</p> <p>Document 4: JP, 2003-244109, A (Mitsubishi Electric Corporation), 29 August, 2003 (29.08.03), [0036]-[0040] and Fig. 5 & WO, 2003/069839, A1</p> <p>Claims 1-38</p> <p>The document 1 cited in the ISR describes generating a check matrix in a low-density parity check code by combining two submatrices, and the document 2 (see in particular page 402, right column "A. Ensembles of Very Sparse Matrices) describes a condition that in a check matrix, the lap of arbitrary two rows is 1 bit. Also, document 3, Fig. 4 describes a check matrix of which the right side portion is a low triangular matrix, and document 4, Fig. 5 describes a check matrix of which the right side portion is a unit matrix, respectively.</p> <p>These documents 1-4 are the documents showing the technical level associated with the relevant art, so that inventions described in claims 1-38 of the present application cannot be regarded as not novel and inventive on account of documents 1-4. Also, it is obvious that these documents 1-4 are industrially applicable.</p>			